RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number:	<u>/0/55/</u> , 209
Source:	P4/10
Date Processed by STIC:	10/20/05
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PCT

RAW SEQUENCE LISTING DATE: 10/20/2005 PATENT APPLICATION: US/10/551,209 TIME: 09:36:27 Input Set : D:\Final Sequence Listing.txt Output Set: N:\CRF4\10202005\J551209.raw 3 <110> APPLICANT: Epimmune Inc. Baker, Denise M. Livingston, Brian D. Chesnut, Robert W. Sette, Alessandro Newman, Mark J. 10 <120> TITLE OF INVENTION: Methods of Identifying Optimal Variants of Peptide Epitopes 12 <130> FILE REFERENCE: 2060.026PC01

C--> 14 <140> CURRENT APPLICATION NUMBER: US/10/551,209

C--> 15 <141> CURRENT FILING DATE: 2005-09-28

17 <150> PRIOR APPLICATION NUMBER: 60/458,026

18 <151> PRIOR FILING DATE: 2003-03-28

20 <160> NUMBER OF SEQ ID NOS: 1946

22 <170> SOFTWARE: PatentIn version 3.3

24 <210> SEO ID NO: 1

25 <211> LENGTH: 10

26 <212> TYPE: PRT

5

6

7

8

27 <213> ORGANISM: Artificial

29 <220> FEATURE:

30 <223> OTHER INFORMATION: Gag 545 variant

32 <400> SEQUENCE: 1

34 Glu Pro Leu Thr Ser Leu Lys Ser Leu Phe

38 <210> SEQ ID NO: 2

39 <211> LENGTH: 10

40 <212> TYPE: PRT

41 <213> ORGANISM: Artificial

43 <220> FEATURE:

44 <223> OTHER INFORMATION: Gag 545 variant

46 <400> SEQUENCE: 2

48 Tyr Pro Leu Ala Ser Leu Lys Ser Leu Phe

49 1 10

52 <210> SEQ ID NO: 3

53 <211> LENGTH: 14

54 <212> TYPE: PRT

55 <213> ORGANISM: Artificial

57 <220> FEATURE:

58 <223> OTHER INFORMATION: Tetanus toxoid

60 <400> SEQUENCE: 3

62 Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu

63 1 10

66 <210> SEQ ID NO: 4

67 <211> LENGTH: 21

DATE: 10/20/2005

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PATENT APPLICATION: US/10/551,209
                                                             TIME: 09:36:27
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                     Output Set: N:\CRF4\10202005\J551209.raw
     68 <212> TYPE: PRT
     69 <213> ORGANISM: Plasmodium falciparum
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     77 Asn Val Val Asn Ser
     78
                    20
     81 <210> SEO ID NO: 5
     82 <211> LENGTH: 16
     83 <212> TYPE: PRT
     84 <213> ORGANISM: Streptococcus sp.
     86 <400> SEQUENCE: 5
     88 Gly Ala Val Asp Ser Ile Leu Gly Gly Val Ala Thr Tyr Gly Ala Ala
                                            10
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     93 <211> LENGTH: 13
     94 <212> TYPE: PRT
     95 <213> ORGANISM: Artificial
     97 <220> FEATURE:
     98 <223> OTHER INFORMATION: Pan-DR-binding epitope
     101 <220> FEATURE:
     102 <221> NAME/KEY: PEPTIDE
     103 <222> LOCATION: (1)..(1)
     104 <223> OTHER INFORMATION: X can be D-alanine or L-alanine.
     106 <220> FEATURE:
     107 <221> NAME/KEY: PEPTIDE
     108 <222> LOCATION: (3)..(3)
     109 <223> OTHER INFORMATION: X can be cyclohexylalanine, phenylalanine, or tyrosine.
     111 <220> FEATURE:
     112 <221> NAME/KEY: PEPTIDE
     113 <222> LOCATION: (7)..(7)
     114 <223> OTHER INFORMATION: X can be tryptophan, tyrosine, histidine, or asparagine.
     116 <220> FEATURE:
     117 <221> NAME/KEY: PEPTIDE
     118 <222> LOCATION: (13)..(13)
     119 <223> OTHER INFORMATION: X can be D-alanine or L-alanine.
     121 <400> SEQUENCE: 6
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     124 1
                         5
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     128 <211> LENGTH: 10
     129 <212> TYPE: PRT
     130 <213> ORGANISM: Artificial
     132 <220> FEATURE:
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     135 <400> SEQUENCE: 7
     137 Glu Pro Leu Thr Ser Leu Lys Ser Leu Phe
     138 1
     141 <210> SEQ ID NO: 8
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RAW SEQUENCE LISTING

RAW SEQUENCE LISTING DATE: 10/20/2005 PATENT APPLICATION: US/10/551,209 TIME: 09:36:27

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144 <213> ORGANISM: Artificial
146 <220> FEATURE:
147 <223> OTHER INFORMATION: Gag 545 variant
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156 <211> LENGTH: 9
157 <212> TYPE: PRT
158 <213> ORGANISM: Artificial
160 <220> FEATURE:
161 <223> OTHER INFORMATION: HLA-A2-restricted epitope
163 <400> SEOUENCE: 9
165 Lys Leu Thr Pro Leu Cys Val Thr Leu
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169 <210> SEQ ID NO: 10
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171 <212> TYPE: PRT
172 <213> ORGANISM: Artificial
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175 <223> OTHER INFORMATION: Gag 386 sequence
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180 1
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184 <211> LENGTH: 9
185 <212> TYPE: PRT
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191 1
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195 <211> LENGTH: 10
196 <212> TYPE: PRT
197 <213> ORGANISM: Artificial -
199 <220> FEATURE:
200 <223> OTHER INFORMATION: HLA-A3/11-restricted epitope
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209 <211> LENGTH: 11
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221 <212> TYPE: PRT
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225 <223> OTHER INFORMATION: Gag 386 variant
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230 1
233 <210> SEQ ID NO: 15
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235 <212> TYPE: PRT
236 <213> ORGANISM: Artificial
238 <220> FEATURE:
239 <223> OTHER INFORMATION: Gag 386 variant
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247 <210> SEQ ID NO: 16
248 <211> LENGTH: 9
249 <212> TYPE: PRT
250 <213> ORGANISM: Artificial
252 <220> FEATURE:
253 <223> OTHER INFORMATION: Gag 386 variant
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258 1
261 <210> SEQ ID NO: 17
262 <211> LENGTH: 9
263 <212> TYPE: PRT
264 <213> ORGANISM: Artificial
266 <220> FEATURE:
267 <223> OTHER INFORMATION: Gag 386 variant
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272 1
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278 <213> ORGANISM: Artificial
280 <220> FEATURE:
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285 Lys Ile Thr Pro Leu Cys Val Thr Leu
286 1
289 <210> SEQ ID NO: 19
290 <211> LENGTH: 9
291 <212> TYPE: PRT
292 <213> ORGANISM: Artificial
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295 <223> OTHER INFORMATION: Env 134 variant
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303 <210> SEQ ID NO: 20
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305 <212> TYPE: PRT
306 <213> ORGANISM: Artificial
308 <220> FEATURE:
309 <223> OTHER INFORMATION: Env 134 variant
311 <400> SEQUENCE: 20
313 Gln Ile Thr Pro Leu Cys Val Thr Leu
314 1
317 <210> SEQ ID NO: 21
318 <211> LENGTH: 9
319 <212> TYPE: PRT
320 <213> ORGANISM: Artificial
322 <220> FEATURE:
323 <223> OTHER INFORMATION: Env 134 variant
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328 1
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332 <211> LENGTH: 9
333 <212> TYPE: PRT
334 <213> ORGANISM: Artificial
336 <220> FEATURE:
337 <223> OTHER INFORMATION: Env 134 variant
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342 1
345 <210> SEQ ID NO: 23
346 <211> LENGTH: 9
347 <212> TYPE: PRT
348 <213> ORGANISM: Artificial
350 <220> FEATURE:
351 <223> OTHER INFORMATION: Env 134 variant
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355 Lys Leu Thr Pro Leu Cys Val 'Ile Leu
356 1
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360 <211> LENGTH: 9
361 <212> TYPE: PRT
362 <213> ORGANISM: Artificial
364 <220> FEATURE:
365 <223> OTHER INFORMATION: Env 134 variant
367 <400> SEQUENCE: 24
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RAW SEQUENCE LISTING ERROR SUMMARY DATE: 10/20/2005 PATENT APPLICATION: US/10/551,209 TIME: 09:36:28

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Output Set: N:\CRF4\10202005\J551209.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

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Seg#:27; Xaa Pos. 1,3,7,13
Seg#:28; Xaa Pos. 1,3,13
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Seq#:31; Xaa Pos. 1,13
Seq#:32; Xaa Pos. 1,3,13
Seq#:33; Xaa Pos. 1,13
Seq#:34; Xaa Pos. 1,13
Seq#:35; Xaa Pos. 1,3,13
Seq#:36; Xaa Pos. 1,13
Seq#:37; Xaa Pos. 1,13
Seq#:38; Xaa Pos. 1,3,13
Seq#:39; Xaa Pos. 1,13
Seq#:40; Xaa Pos. 3
Seq#:44; Xaa Pos. 3
Seq#:47; Xaa Pos. 3
Seq#:50; Xaa Pos. 3
Seq#:52; Xaa Pos. 1,3,13,14
Seq#:319; Xaa Pos. 11
Seq#:338; Xaa Pos. 404
Seq#:351; Xaa Pos. 377
Seq#:357; Xaa Pos. 1,23,109,134,154,210,211,248,257,264,304,360,362,390,408
Seq#:401; Xaa Pos. 239,244,245,246,253,363,393,394,401,404,424,426,427,432
Seg#:401; Xaa Pos. 436,442,447,467
Seq#:415; Xaa Pos. 237
Seq#:457; Xaa Pos. 76,149
Seq#:477; Xaa Pos. 342
Seq#:505; Xaa Pos. 417
Seq#:524; Xaa Pos. 7,16,35,39,43,44,59,94,98,151,152,189,207,229,237,250
Seq#:524; Xaa Pos. 269,323,337,365,393,430,434,452,454,457,466,469,480,489
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Seq#:524; Xaa Pos. 674,685,701,702,722,729,748,752,773,782,787,788,789,794
Seq#:524; Xaa Pos. 795,798,801,822,823,826,847
Seq#:529; Xaa Pos. 545
Seg#:541; Xaa Pos. 347,449,481,482,483,491,615,646,733,845
Seq#:568; Xaa Pos. 100,109,482,490,501,506,507,512,687,706,713
Seq#:600; Xaa Pos. 52
Seq#:626; Xaa Pos. 557
Seq#:627; Xaa Pos. 402
Seq#:631; Xaa Pos. 568
Seq#:643; Xaa Pos. 95
Seq#:653; Xaa Pos. 200
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Output Set: N:\CRF4\10202005\J551209.raw

Seq#:654; Xaa Pos. 72
Seq#:661; Xaa Pos. 94
Seq#:672; Xaa Pos. 3
Seq#:683; Xaa Pos. 75
Seq#:686; Xaa Pos. 100
Seq#:691; Xaa Pos. 1,2,11,12,17,30,38,58,63,65,82,83,84,85,86,88,92,101,109
Seq#:691; Xaa Pos. 114,133,141,142,159

Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete, per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

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RAW SEQUENCE LISTING ERROR SUMMARY DATE: 10/20/2005 PATENT APPLICATION: US/10/551,209 TIME: 09:36:28

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RAW SEQUENCE LISTING ERROR SUMMARY DATE: 10/20/2005 PATENT APPLICATION: US/10/551,209 TIME: 09:36:28

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VERIFICATION SUMMARY DATE: 10/20/2005 PATENT APPLICATION: US/10/551,209 TIME: 09:36:28

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L:14 M:270 C: Current Application Number differs, Replaced Current Application Number
L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:123 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:0
L:432 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:0
L:462 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:0
L:487 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:0
L:512 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 after pos.:0
L:537 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 after pos.:0
L:567 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:0
L:592 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33 after pos.:0
L:617 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34 after pos.:0
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L:9463 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:338 after pos.:400
L:11227 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:351 after pos.:368
L:11958 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:357 after pos.:0
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L:17709 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:401 after pos.:224
M:341 Repeated in SeqNo=401
L:19611 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:415 after pos.:224
L:25306 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:457 after pos.:64
M:341 Repeated in SeqNo=457
L:28820 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:477 after pos.:336
L:35106 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:505 after pos.:416
L:39622 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:524 after pos.:0
M:341 Repeated in SeqNo=524
L:40898 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:529 after pos.:544
L:43595 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:541 after pos.:336
M:341 Repeated in SeqNo=541
L:49656 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:568 after pos.:96
M:341 Repeated in SeqNo=568
L:56878 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:600 after pos.:48
L:62844 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:626 after pos.:544
L:63040 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:627 after pos.:400
L:63986 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:631 after pos.:560 L:65456 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:643 after pos.:80 L:66118 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:653 after pos.:192
L:66158 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:654 after pos.:64
L:66610 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:661 after pos.:80
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VERIFICATION SUMMARY

DATE: 10/20/2005

PATENT APPLICATION: US/10/551,209

TIME: 09:36:28

Input Set : D:\Final Sequence Listing.txt Output Set: N:\CRF4\10202005\J551209.raw

L:67290 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:672 after pos.:0 L:68014 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:683 after pos.:64 L:68214 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:686 after pos.:96 L:68602 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:691 after pos.:0